



Croatia: Opportunities for Electric Vehicles, Parts and Systems

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Country Overview

Country Demographics

- **Size of Country:** population – 4.48 million; area – 56,594 km²
- **GDP per Capita:** USD 17,703
- **Population concentration:** approximately 800,000 citizens live in the capital city (Zagreb); the coastal cities Split and Rijeka are the next two largest residential areas, with 220,000 and 144,000 inhabitants, respectively.
- **Commute needs:** there is no data on the average commute distance in Croatia or the number of citizens that commute to work; however, 1,000 public transportation buses in Croatia transport 190 million passengers annually. In addition to that, Zagreb and Osijek (pop. 114,000) operate tram transportation systems.

There are 1.53 million personal vehicles in Croatia with an average age of over 10 years.

Energy Consumption

- Dependence on foreign oil: 80 percent
- Status of electrical generation and transmission: In 2008, Croatia generated 11.35 GWh of electricity and consumed 18.9 GWh. Additional electrical generation capacity for the country was 3.74 GW.

In 2007, Croatia adopted regulations to support the development of renewable energy projects necessary to meet the goal of a minimal share of 5.8 percent of renewable energy (excluding hydro-power plants above 10 MW) in the total electric energy supply by 2010 (now postponed until 2012). In its 2009 progress report, the European Commission stated that Croatia had achieved significant progress in the area of climate change control and air quality, especially in terms of developing plans for the reduction of SO₂ and NO_x emissions.

Transportation Overview

With 340 cars per 1,000 inhabitants, Croatia is still below the EU25 average of approximately 500 cars per 1,000 inhabitants. Combined personal vehicle and bus transportation on the roads outside of cities account for 40 percent (58 million passengers) of the total passenger transportation in Croatia.

Transportation systems within city limits are often overinvested and subsidized by the respective cities. The European Bank for Reconstruction and Development (EBRD) recently provided lending to two smaller cities in Croatia for the renewal of their public transportation bus fleet.

While there are no car manufacturers in Croatia, several companies manufacture plastic parts for major car companies. Electric automobiles were reserved for few enthusiasts converting used cars into EVs, but in 2009 the company Dok-Ing Ltd. developed its own EV concept “XD” (www.xdconcept.com) and presented it at the Geneva Car Show in 2010. The engine and the accompanying parts are imported from U.S. companies Schlenker Enterprises (Illinois) and Agroresources (Oregon).

Besides Dok-Ing Ltd. (www.dok-ing.hr), several companies plan to import EVs from China and adjust them in accordance with the local standards. One of them is Nobis Ltd. from Rijeka (<http://www.nobis-ri.hr/en/index.html>).

As the infrastructure for electric cars doesn't exist and there are no major incentives for choosing an EV over a conventional personal vehicle, there are currently more challenges than opportunities for U.S. exporters.

Conclusion

Notwithstanding the media attention, the usage of electric vehicles in Croatia has not spread beyond a few individual enthusiasts and there are very few businesses involved in related production. Toyota Prius was the first widely recognized and well-accepted hybrid, but its sales in Croatia are very low and Croatia is very far from having a feasible plan to support the introduction of EVs. All of this could change abruptly should Croatia's first EV succeed in the international market.

Sources

State statistical bureau (www.dzs.hr)

Croatian Ministry of Economy, Labor and Entrepreneurship (www.mingorp.hr)

Croatian Energy Institute "Hrvoje Pozar" (www.eihp.hr)

For More Information

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